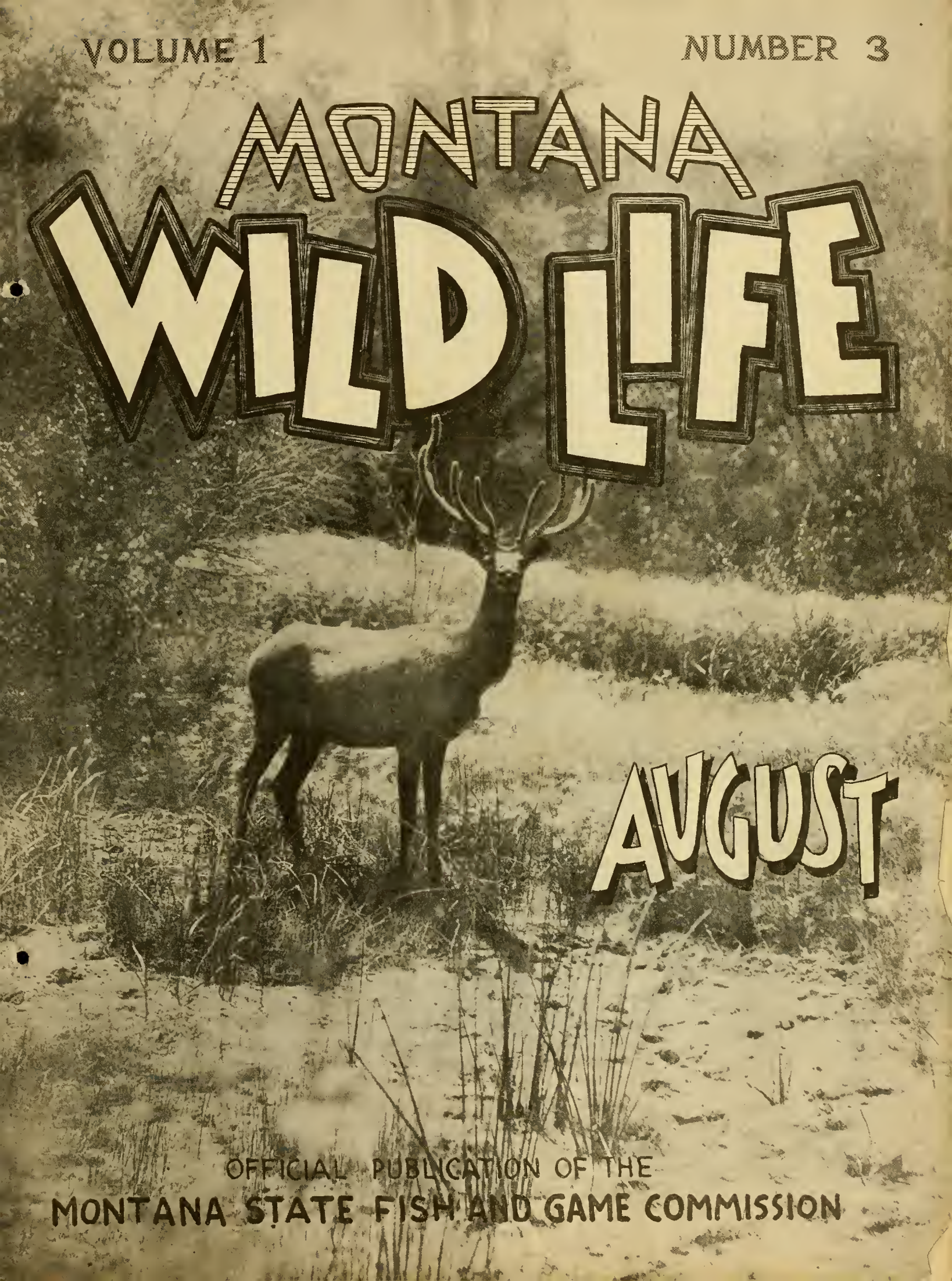
VOLUME 1 NUMBER 3

MONTANA WILD LIFE



AUGUST

OFFICIAL PUBLICATION OF THE
MONTANA STATE FISH AND GAME COMMISSION

Out Fishin'

A feller isn't thinkin' mean,
Out fishin';
His thoughts are mostly good and clean,
Out fishin';
He doesn't knock his fellow men,
Or harbor any grudges then;
A fellow's at his finest, when
Out fishin';
The rich are comrades to the poor
Out fishin';
All brothers to the common lure
Out fishin';
The urchin with the pin and string
Can chum with millionaire an' king;
Vain pride is a forgotten thing
Out fishin'.

A feller gets a chance to dream,
Out fishin';
He learns the beauties of a stream,
Out fishin';
An' he can wash his soul in air
That isn't foul with selfish care,
An' relish plain and simple fare
Out fishin';
A feller has no time fer hate,
Out fishin';
He isn't eager to be great,
Out fishin';
He isn't thinkin' thoughts of self,
Or goods stacked high upon a shelf,
But he is always just himself,
Out fishin'.

A feller's glad to be a friend,
Out fishin';
A helpin' hand he'll always lend,
Out fishin';
The brotherhood of rod an' line,
An' sky and stream is always fine;
Men come real close to God's design,
Out fishin';
A feller isn't plottin' schemes,
Out fishin';
He's only busy with his dreams,
Out fishin';
His livery is a coat of tan,
His creed: To do the best he can;
A feller's always mostly man,
Out fishin'.

MONTANA WILD LIFE

Official Magazine of The Montana State Fish and Game Commission

VOL. I. HELENA, MONTANA, AUGUST, 1928. NO. 3.

State Reaps Rich Harvest In Game Fish Eggs

Dr. I. H. Treece

SPAWN-TAKING operations at the Flint creek station at Georgetown Lake, near Anaconda, have been practically concluded for the season with the total crop harvested for the six-weeks season thus far totaling 39,258,734 eggs of grayling, rainbow and native trout. According to figures compiled by Kenneth McDonald, superintendent in charge of the Georgetown hatchery, who is working under direction of Dr. I. H. Treece, veteran expert of the Montana State Fish and Game Commission, the count shows 25,019,458 native trout eggs, 390,456 rainbow trout eggs and 13,848,820 grayling eggs. This amazing supply of eggs, enough to supply the 14 state hatcheries for the season with a quantity left over for exchange with other states, has been distributed among the state stations where fingerling trout are now being developed to restock Montana trout waters to keep pace with the annual toll taken by fishermen of the Treasure State and our visiting neighbors who look toward Montana as their summer playground.

The work at Georgetown Lake is amplified by the egg-take at the Lake Ronan spawning station, about five miles from Proctor. According to the last count there completed by Leo Gilroy, superintendent in charge, who is also working under direction of Dr. Treece, the season's take has totaled 3,149,145 rainbow trout eggs and 98,520 native trout eggs.

This brings the total egg take for the short spring spawning season at the two Montana stations to 42,506,400.

The Flint creek spawning station at Georgetown Lake is recognized as the largest station of its kind in the world.

Experts assert that these eggs have a commercial market value of about $2.00 per thousand, hence the total crop harvested during the season has an actual value to Montana sportsmen of more than $85,000.00.

Fish culturists in the employ of the Montana Commission declare that this season's work at the spawning stations has been hampered by the late, cold spring and the result has been a decrease of about 6,000,000 eggs taken from Georgetown Lake with a corresponding decrease in the take at Lake Ronan. The Georgetown decrease is shown largely in the native trout spawn. Because of the fact that Georgetown Lake remained frozen over until after the opening of the fishing season in May it became necessary for the Commission to extend the closed season there for one month to permit spawn-taking operations at the mouth of Flint creek. Cold weather caused thousands of trout to spawn in the mouth of the creek without entering the traps or to decline to make the run up the creek to spawning haunts. More favorable weather conditions next year will bring the count back to the enormous total of former years, because of revelations made by tests showing that the fish still remain in the lake.

Under spawn-taking systems perfected by the corps of experts working under direction of Dr. Treece, a trout is seldom lost during the artificial removal of the eggs.

Trout that enter the traps at Flint creek average from 16 to 30 inches in length.

Rainbow trout, when caught in the Flint creek traps, are being transferred to the speedy fish trucks and removed to Silver Lake, a few miles away, to

Experts Taking Eggs from Montana Trout

—Photo by Richard L. Throssel of Billings.

Here are shown the fish experts of the Montana State Fish and Game Commission at work taking spawn from grayling, rainbow and native trout at the spawning station at the mouth of Flint creek where it empties into Georgetown Lake, near Anaconda. The fish, held in the traps while running up the creek to spawn, are dipped out with the long-handled nets, stripped by the staff of experts, the eggs carefully placed in cans and, after being thoroughly cleansed and fertilized, the eggs are then rushed to the hatcheries. Dr. I. H. Treece, veteran fish expert of the Department, is shown bareheaded in the immediate foreground clad in his slicker and waders, up to his waist in the cold water stripping the big fellows. The spawning season usually lasts about six weeks and hundreds of visitors are attracted to the station during the interesting operations.

prevent the possibility of crossing the rainbow with the native. The cross that has resulted has produced a hybrid that is barren of spawn at three years, when the average trout begins reproduction under natural conditions.

After entering the runways the trout are seined carefully and placed in handling traps. The cool waters of Flint creek flow through these traps and the milling thousands of trout are kept in their natural condition. Two to four men experienced in the work are stationed at each handling trap and thousands of visitors are annually attracted to the spot to watch the interesting operations.

The workers don waders and slickers, wear a woolen glove on their left hand to hold the trout and walk right out among them. The trout are placed in a handling box with the big dip nets. The expert reaches into the box, grabs a female with the gloved hand, holds the fish by the head, swings the tail under his arm, gently bends the head backward toward the tail and, if the trout is in proper condition for spawning, the eggs are brought forth by stripping and caught in a prepared pan.

When a quart of eggs has been collected a male of the same species is caught and milt for fertilizing the eggs is stripped into the pan. Experts stir the eggs thoroughly with their fingers, mixing them with the milt. The eggs are then washed and placed in cans with different varieties kept separate.

Dr. Treece estimates that under natural spawning conditions only about 10 per cent of the eggs hatch, while under artificial or hatchery methods more than 80 per cent hatch and are later developed for planting in Montana streams.

Immediately after each take is completed and the traps are emptied, with the trout being returned to the lake and their native haunts, the eggs are placed in cooled, specially constructed trucks built for the State Commission and rushed to the hatcheries by express.

Upon receiving eggs at a hatchery the first step taken after unpacking is to ascertain the temperature. Then follows the slow raising of the temperature. After the eggs are tempered they are put in baskets or stacks of trays to eye or hatch.

There are two stages of eggs, green and eyed. Green eggs are those which have been fertilized, but in which the incubation period has not started. Eyed eggs are those which have been incubated to a point where the embryo is well defined and the eye spots are plainly visible. If the eggs are green and in water of an average temperature of 50 degrees, it will take from 14 to 18 days for them to become eyed.

They are then syphoned out of baskets into a tub or bucket for the purpose of giving them a shock. This shock is necessary to kill the blank or unfertile eggs. The blank or unfertile eggs are then picked out and the eyed eggs are put back in the baskets to hatch, which will take about 10 or 14 days. When the eggs hatch they are called fry; after they begin to take food they become advanced fry. They remain advanced fry until they become an inch long, when they reach the fingerling age, which is fingerling No. 1, meaning they are an inch long. They remain in the fingerling class until a year old, when they are called yearlings.

When people are advised the number of eggs in a basket or of fish in a can, they often seem astounded when told that a basket contains 25,000 or more and a can from 1,000 to 2,000. The method of counting eggs is to put exactly four ounces in a certified graduate. Experts then count the four ounces and divide the total by four, which gives the number per ounce. To count fish, specialists put exactly four ounces of water in the graduate and then put in fish until the water comes to eight ounces, which gives a fish displacement of four ounces. They next count the four ounces of fish, divide the total by four and get a fairly accurate count per ounce.

The inside dimensions of the average standard trough in which the baskets or trays are placed are 15 feet and 5 inches long, 14⅛ inches wide and 6¼ inches deep. The trough should have a flow of eight gallons of water per minute.

A trough will hold six baskets capable of holding an average of 25,000 each, or 150,000 eggs. It will hold ten stacks of trays with six trays to a stack, or 360,000 eggs or fry. The average total fish carried in a trough is about 50,000, this amount depending upon age and size.

And in this manner is the State Commission restocking Montana's streams and lakes.

Woulds't Cast a Fly Into this Pool?

—Photo by Richard L. Throssel of Billings.

Here's a sight for the sore eyes of fishermen. In the traps at the mouth of Flint creek at the Georgetown spawn-taking station near Anaconda, the largest station of its kind in the world, thousands of red-sided and rosy-cheeked rainbow, husky native trout and fighting grayling are caught in the traps while battling their way upstream to spawn. They are held in the "ripening" ponds and then artificially stripped of their eggs by experts in the employ of the Montana State Commission. This unusual photograph of one of the ponds shows one small portion of one day's catch in one of the traps. The picture was taken after the spot was shaded so that the fish, swimming in cool creek water, could be caught by the lens of the camera operated by Dick Throssel, well known photographer of wild life.

WHIPPING

By Guy Hernis

(In Outdoor America)

DID YOU ever, dear old comrade,
Feel that all-consuming joy?
That is heir to all God's children,
Be they woman, man or boy.
The thrill I now refer to
Has its setting in a nook;
Quite secluded from observance,
In a happy, babbling brook.
With muscles tense,—but shaky;
Your trusty rod in hand;
Did you ever "whip a fly," Pal?
'Course you have, you understand.
Now a beauty darts to seize it!
Then a jerk,—to set the hook!
He misses! and you see him
Quickly vanish in the brook!
Then your heart goes pit-a-patter,
As you nervously prepare,
Once again to whip his "favorite,"
Hoping that he still is there!
Then you see a gleaming object,
And you draw the line up tight!
You observe a dash for freedom!
Boy, Oh! Boy, but they can fight!
In your creel you finally place him!
You have won the battle FAIR.
It's the game, that's worth the candle;
Shake! Old Timer,—you've been there.

Safeguard the Wild Brood Stock

By CARLOS W. AVERY, President American Game Protective Association

ARTIFICIAL help to nature in fish propagation has progressed a long way. Sole reliance on natural reproduction would mean little or no fishing in much of our water.

Stripping of the spawn and milt from wild fish and hatching of the eggs in hatcheries results in enormously greater percentage of hatch than is possible from naturally deposited eggs for many reasons, and the fry hatched in hatcheries are under control. In some cases they must be planted at once, but in others they are reared to fingerling, and even adult stage, before planting. Wide and general distribution to waters requiring replenishing is made with artificially hatched fish, while those hatched naturally only serve to maintain the supply in the specific waters in which they hatch.

Maintenance of a large supply of wild fish in waters available for spawning operations is of the utmost importance. Overfishing of such waters results in ruining the propagation work. Complete closing of such supply waters to fishing is entirely warranted.

Not all varieties of fish are susceptible to artificial spawning; the trouts, grayling, and wall-eyed pike or pike-perch are three species, important as food and game fish, which are. Most parts of the country are unable to secure spawn from wild trout, and must depend upon retaining brood stock in hatcheries, but in the mouutain sections of the west there are certain localities where wild eggs may be had in large numbers.

Montana has the largest trout and grayling spawntaking station in the country at Georgetown Lake near Anaconda. Here more than fifty million rainbow and native black-spotted trout and grayling eggs were taken in six weeks last year. Elaborate systems of dams and traps have been installed by the State Fish and Game Commission in the tributary streams flowing into this lake where the fish are caught as they are ascending the streams to spawn. The number of fish handled is indicated by the total take of eggs, trout yielding about 2,500 eggs to the female fish and grayling two or three times as many. The aggregated handled is around 100 tons of fish, all of which are returned unharmed to the water to return to the lake. Montana is the only place in the United States outside of Alaska where grayling eggs may still be had in large numbers, hence the great importance of rigid protection of the sources of supply.

Minnesota leads in the propagation of the walleyed pike or pike-perch by reason of the fact that this state has a great number of lakes abounding in this fine species of game and food fish and the supply has not yet heen reduced by fishing to the point that spawntaking has become unprofitable. Steps have been taken there to safeguard the most productive lakes by restricting fishing where the pike perch congregate at spawning time. Other states neglected to take this precaution and as a result this valuable fish can no longer be propagated in large numbers by artificial means, which will result in time in their disappearance.

The figures from Minnesota are impressive, over 430 million pike-perch have been actually hatched and planted in that stae in 1927, which means that upwards of 600 or 700 million eggs were collected at the various spawning stations from wild fish, the usual percentage of hatch being from 60 to 65 percent average, though it sometimes reaches over 85 percent, while probably not over one to ten per cent deposited naturally in the streams and lakes every hatch, due to destruction by predatory fish, smothering in sand and mud, or failure to fertilize.

As the pike perch can not be retained in ponds for breeding purposes as trout are and eggs can only be obtained from wild fish it becomes obvious that the utmost care must be exercised to safeguard the wild brood stock in large numbers in their natural habitat.

Game Guardians of Nation Meet

SPORTSMEN of Montana and the west are looking forward to the week of August 27 to 31, inclusive, which will be devoted to the conventions of three national conservation organizations at the Olympic Hotel, Seattle. The three organizations which will hold their annual meetings at that time are the International Association of Game, Fish and Conservation Commissioners, whose dates are August 27 and 28; the American Fisheries Society, August 29, 30 and 31, and the Western Association of State Game Commissioners, August 30 and 31.

A committee of arrangements has been formed, of which Charles R. Pollock, State Supervisor of Fisheries of Washington, is chairman, and Clinton W. Rowley, Chairman of the Washington Conservation Council, is secretary.

There will be several interesting side trips, including boat trips on Puget Sound, trips to the Washington College of Fisheries and to the state and federal fish hatcheries and a trip to Victoria and Vancouver, British Columbia, by boat. A banquet will be tendered delegates to all three conventions and many other courtesies will be extended.

The programs of the three conventions will stress problems affecting the western coast in particular but will, as usual, include many questions of national and continental interest.

This meeting will be attended by members and delegates and official representatives of the federal and state governments interested and is expected to be one of the largest and most significant gatherings of the kind ever held in the country.

Some of the subjects of particular interest to the west which will be considered on the programs include the problems of the halibut fisheries; the maintenance of salmon in western streams and their relation to hydroelectric and other industrial development; the Alaska fisheries; the pollution problem in western waters and many others of equal importance.

The three conventions will be presided over by Dr. Emmeline Moore of New York, President of the American Fisheries Society; Mr. I. T. Quinn, Alabama State Game Commissioner, President of the International Association of Game, Fish and Conservation Commissioner; and Robert H. Hill of Helena, Montana State Game Warden, President of the Western Association of State Game Commissioners. Papers and addresses will be presented by authorities in administration and scientific research of United States and Canada.

At the meeting of the State Fish and Game Commission at Lewistown August 4, marking the opening of the three-day season on sage grouse in Fergus, Petroleum and Big Horn counties, it was decided that the conventions at Seattle shall be attended by a goodly representation of Montana Fish and Game leaders. Those who will attend as official representatives of the state commission are Chairman Thomas N. Marlowe of Missoula, State Game Warden Robert H. Hill of Helena, John W. Schofield of Big Timber and Dr. I. H. Treece of Anaconda, field superintendents in charge of state hatcheries.

Carp, Poor Fish, Horrible Example

MONTANA sportsmen keenly interested in the scope of the conservation program of the State Fish and Game Commission will appreciate the stand taken by Henry O'Malley, United States Commissioner of Fisheries, regarding the pestiferous carp. Many of Montana's lakes are afflicted with the carp pest. Continued efforts are being put forth by the State Commission to rid the lakes of these hibernating piscatorial hogs and experiments with traps and nets are being carried on constantly. Mr. O'Malley, in a recent statement, declares that perhaps the greatest value of the carp in America has been that of the horrible example and the warning to go slow in attempting to fill our streams with exotic forms of life.

"George Washington admonished against entangling alliances, and restricted immigration is a new note in our policy," Mr. O'Malley points out, "but with one or two exceptions it has been a long-standing practice as regards our game fish population. We wavered in this policy and sought carp; we got it, we have it, and we will continue to have it.

"The only other serious effort we have made to graft any new shoots on the family tree of American fresh-water game fish was when we brought in the European brown trout and its first cousin, the Loch Leven. No disastrous results have accompanied the spread of this alien, and it has filled a need in some sections. But this gives us only a 50 per cent batting average on our importations and the wisest course is to proclaim our satisfaction with what we have and let the rest of the world roll by.

"The fisherman and hunter is the only man who will tax himself by means of licenses and will expend his time, energy, and funds in other ways to restock fields, forests and streams with game and fish by which others will benefit. He receives no duly certified guarantee that he will catch any of the fish so provided. He takes his chances gladly of being able to ultimately prove to the fish that he is smarter than competing fishermen.

"In paying tribute to the fisherman, I would be guilty of bias if I did not speak a good word for the fish themselves. The fish can be transmuted into human health, vigor, and welfare by the simple process of eating it. A fish living in some meandering canal is a manifestation of nature but a fish tucked away in the alimentary canal is a token of health and satisfaction. In very recent times we have called on the fish for further reinforcements and the Bureau of Fisheries has actively agitated the greater consumption of cod-liver oil to combat rickets and that accompanying scourge of humanity—bow legs. My observations, happily facilitated by present fashions, have convinced me that many millions of unfortunatecod must sacrifice their lives and livers before the supporting elements of humanity are evolved from the parabolic to the parallel.

"The United States has recently developed a new product for export in the shape of so-called Unofficial Ambassadors of Good Will of which Colonel Lindbergh and Will Rogers are shining examples. I want to assure you that there have been going out of the country for a number of years offerings which should be potent in establishing that much-sought good will. We have been generous with some of our treasured resources, especially our native game fish. Many countries have called for them and where there has been any chance of successful transplanting, without depriving our own people of what they need, such requests have been met. The Michigander who likes his Mackinaw trout need not go without it if he happens to be in Switzerland. Several Alpine lakes have been stocked with them. Years ago, bass, brook and rainbow trout were emigrating to Great Britain and continental Europe. The Scandinavian countries and Germany received bass and there has apparently been a slow extension to other regions. Word was received recently from Buda-Pesth making inquiry about small-mouth bass. The eel is considered the champion globe-trotting fish at the present but South Africa has requested a shipment of bass and miscellaneous fish which would set a new non-stop record. Incidentally, rainbow trout are already thriving in some waters of that country.

"In the Argentine, trouts and salmon have moved in and some angry Argentine has written pointing out a Yankee characteristic to overdo a good thing and stating that there are now too many fish.

"Hawaiians, living under our flag, deserve all the advantages that the mainland affords and they have rainbow and brook trout fishing at least. The Philippines chose bass and the goods were received in fine condition. From New Zealand come tales of good rainbow trout fishing and the establishment of our Pacific salmon in their streams to a limited extent."

Commissioner O'Malley said he was supremely optimistic that true conservation of our fish and game life will become a guiding principle and an accomplished fact in our national consciousness.

"My optimism," he said, "is based on that interesting quirk in the American character which leads us to give our real interest and honest endeavor to those prosaic affairs which constitute our livelihood and natural existence but impels us to reserve our real enthusiasms and our fervent aggressiveness for those things that comprise our recreation."

Deforestation with its attendant evils has made it more difficult for papa and mamma fish to raise as large families as formerly, and they haven't practiced birth control or favored companionate marriages, according to Lewis Radcliffe, United States Assistant Deputy Commissioner of Fisheries.

"Reclamation of swamp, bayou and marshland has destroyed the homes of the little fish, compelling us to establish nurseries and orphanages to protect them from their big brothers and sisters," he said. The clan of the salmon and shad have encountered man-made dams and other barriers on their way to the places of their birth to deposit their eggs and thus perpetuate their race. Worse still, we are pouring an ever-increasing flood of domestic sewage and trade wastes into our streams, making open sewers of many of them. And then we indulge in lengthy arguments as to why the fish are disappearing.

LO! THE POOR FISHERMAN

Consider the bold fisherman.

He arises at the voice of the bird.

He disturbeth the whole household.

He goeth forth laden with gear and his mouth is filled with boastings.

Far into the night he returneth.

He smelleth of strong drink and the truth is not in him.

WHAT BECOMES OF SHED HORNS

It has been pretty well settled that horns of deer and moose which are shed in the winter are eaten by rodents. Many have been found which are partly eaten which have the teeth marks of mice, chipmunks, spuirrels andporcupines. Horns disappear quickly after they are shed as few are found in the woods. A novel theory, interesting but extremely improbable, has recently come to United States Game Warden Webster H. Ransom of Spokane, Wash., asking his opinion of it.

A game warden reports to him a theory advanced by a lumber-jack that deer eat their own horns by licking them after they are shed until they are consumed. As Mr. Ransom remarks, a deer's tonguewould need to be constructed like a rasp or file to fit such an explanation.

This is one of those instances, which are numerous, of erroneous conclusions on questions of natural history so frequently arrived at by untrained observers. The fact that a man lives close to nature does not necessarily imply that he is an accurate or reliable authority.

The amateur fisherman had hooked a small trout and reeled it in until it was jammed against the end of his rod. Holding it in the air in a helpless way he asked:

"What shall I do now?"

"Climb up the rod and stab it," was the disgusted reply of his instructor.

Bear River Marshes Mean More Ducks

MONTANA sportsmen who enjoy hunting migratory waterfowl are deeply interested in the vast conservation program undertaken in restoring the Bear River marshes in Utah as a rest area for ducks, geese, and other birds. Montana's ducks and geese, with the exception of comparatively few hatched on local lakes and potholes, are migratory birds. Thousands take their northward flight over the Bear River marshes. In these flights they are dependent on proper feeding grounds and rest areas. In these marshes they find food and sustenance to fortify them against the rigors of the flight northward. The Izaak Walton League of America is piloting the way in this conservation work, co-operating with state authorities of Utah and adjoining states.

Earl A. Fry, former president of the Washington State Sportsmen's Association, who is well known throughout Montana, recently compieted a trip over the marshes with Dave L. Madsen, fish and game commissioner of Utah. His report is of interest to every Montana sportsman. He writes in part:

"The public shooting grounds are about seventy miles north of Salt Lake City and the extreme north end of the great Salt Lake where the Bear River flows into the lake.

"Before starting operations the land was a flat sagebrush country with occasional knolls. Dyking has been carried on by extending out from the knolls of land which cut down the distance of dyking considerable.

"When completed this summer the Utah State Game Department will have between 70,000 and 80,000 acres within their public shooting grounds. Money spent in this work will amount to about $50,000, this flooding over 17,000 acres.

"A series of large lakes are being formed in the dyking work, each having a gate control which allows water to be run from one to another. Water depth is not over boot high in any one of the lakes. It was necessary to erect a board wall along each dyke to build to, mud and dirt being dredged up alongside the fence. A mere mud dyke would not hold from wave action during windy weather. Ten-foot two-by-fours are driven into the mud and the one-inch material fastened to stringers for the fence. It is expected that in time the dykes will be of sufficient strength to keep themselves up after the fencing has rotted out. All dyked lakes are of fresh water, the possible waterways available before that time being extremely salty from the great Salt Lake.

"Mr. Madsen advises that they checked 470 shooters in one day on these lakes last winter during the season. After the first two opening days they allow shooting only on Wednesday and Sunday. When the work is finally completed this summer Mr. Madsen intends to call a conference of sportsmen for the purpose of determining a method of regulation for the grounds. This will take in the establishment of blinds and shooting stations and the regulation of their use that the shooting will not be bunched up.

'In addition to the state shooting lands, it is expected that work will start shortly on the federal dykes following passage of the appropriation bill which will add between 60,000 and 70,000 acres.

"The bill calls for establishment of 60 per cent of the area for feeding grounds and 40 per cent for shooting. The preliminary work or survey on the federal program was financed through popular subscription among the sportsmen of the Pacific Coast.

"Conditions as to sick waterfowl could not be observed at this time due to the fact that this condition was practically eliminated last fall with a large increase in the water supply and the enlarged areas of dyked fresh water lakes.

"The public shooting grounds can be reached at all times of the year, the local counties conditioning the roads.

"While we visited this district at just about the time the waterfowl had largely migrated to the northern districts, we found a large number of many kinds. Mr. Madsen advised that he had viewed a band of 25,000 geese passing over a given point in this territory last year.

"Waterfowl and shore birds seen on this trip included: Sickle bill curlew, western willett, avocet, gadwell, red heads, broadbills, widgeon, green-winged teal, cinnamon teal, pintail, mallards.

"In my estimation the work being carried on under Mr. Madsen's office is one of the greatest pieces of constructive game restoration to be found in America. They are taking the raw, valueless land and turning it into a duck factory which helps almost the entire western United States.

"Another item of interest which I found is the fact that sportsmen who wish to increase the production of mallards in their locality, with favorable feeding and resting conditions can take two settings of eggs from the hen, leaving one in the rest and she will lay at least three clutches and bring out the third herself. The eggs taken from her should be hatched with hens."

MR. SPORTSMAN—

Do you realize—

That you provide all the funds used by the Montana State Fish and Game Commission—

That money derived from the sale of hunting and fishing licenses is expended for the protection and propagation of game and game fish—

That the State Commission and its employees, including deputy game wardens, are working to provide better hunting and fishing for YOU—

That if it were not for your wholesome cooperation, the Commission and the wardens there would soon be neither game to hunt nor fish to catch—

That the man who hunts or fishes in closed season, or takes more than the limit, or breaks any of the rules made for the benefit of all, is CHEATING YOU?

MADSEN TO SUPERVISE REFUGE

DAVID H. MADSEN, State Fish and Game Commissioner of Utah, formerly president of the Western Association of State Game Commissioners, has resigned as state commissioner to accept the superintendency of the new migratory bird refuge authorized to be established at Bear River Bay, Utah, under the Bear River Migratory Bird Refuge Law passed by the last Congress. This bill carried authorization for $350,000 appropriation, of which $200,000 was actually appropriated by the last Congress, which is authorized for the construction of such dikes, spillways, buildings and improvements as may be necessary for the establishment of a refuge for migratory wildfowl and to acquire such lands and water rights as it is necessary to purchase. Mr. Madsen assumed his new position July 1.

The Bear River marshes of Utah constiitute the greatest wildfowl resort of Western United States. Millions of wild ducks, geese, shorebirds and other fowl congregate there in migration and numbers of them nest in that region.

The chief object of this refuge and appropriation is to safeguard the area against the recurrence of the enormous looses of birds, particularly ducks, that have resulted for many years from concentration of alkali in the waters of the bay. It has been found that deepening the waters and supplying an abundance of fresh water prevents this mortality.

This bill permits the use of not to exceed 40 per cent of the area included as public shooting ground.

DIDN'T KNOW HE WAS LUCKY

Last summer an irate angler wrote a red hot letter to one of the artificial-lure manufacturers somewhat to this effect:

"Your blankety blank lure isn't worth a d—. I have just come back from a two weeks' vacation and my right arm is out of joint from casting that fool contraption of yours and I never got a strike."

The manufacturer, so it is said, replied to the angler thus: "Stop your crabbing! You don't know when you are lucky. You have only one of my lures—why man I have 30,000 of them."

MONTANA STATE FISH AND GAME COMMISSION

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A ROLL OF DISHONOR

IN MINNESOTA, and in other parts of the nation, newspapers have begun to print the names of convicted "game hogs." A group of self-styled "sportsmen" from the Gopher State was caught during the ringneck pheasant season in South Dakota not only with 270 more of these beautiful birds than they were entitled to, but also with the carcass of an out-of-season deer, which bad been labeled mutton. All of these gentlemen got their names in the home-town paper, and not in small type.

"Compared to the bootlegging of game, the bootlegging of liquor is a reputable occupation," declares Outdoor America, which rejoices in the fact that none of the besmirched hunters were members of the Izaak Walton League of America. The magazine reprints their names, and by this time a good many thousands of persons have read them. If this practice is efficacious in solving the game-hog and the fish-hog problems, more power to such magazines, devoted to the interests of conservation, and more power to the editors of home-town papers spunky enough to give publicity to such doings by otherwise reputable and even prominent citizens!

VANISHING GAME

LAUDING the work of the Associated Sportsmen's Clubs of California in checking inroads on wild life, the San Francisco Examiner says editorially:

"This state has been the sportsmen's and nature-lovers' paradise. Such is our fame, and it is one of our chief attractions in the eyes of the world. Ruin the vigor and beauty of outdoor nature, exterminate the forest creatures, silence the bird songs, destroy the flowers and trees—and you ruin California.

"Fish and wildfowl must have breeding places; four-footed animals must have covert and food. The selfish sportsman speeds the time when hunting and fishing will be no more. Automobiles, highways and the growth of population are making things hard enough for the wild things as it is. Every visitor to forests and streams bears a share in the responsibility to our state. That responsibility should be realized to the full."

Other states that once justly could lay claim to being a "sportsman's paradise," but which now can boast but a vestige of their former glory, painfully are trying to restock forests, fields, and streams, but western states still possessing wild life in abundance should heed the warning and support agencies striving for the maintenance of wild life resources.

ASK THE WARDEN

DON'T DODGE the game warden. Look him up. And if you've had a wrong impression as to what sort of a fellow he is, the chances are you will be surprised.

It is the warden's business to help maintain and improve your sport; not to curtail it. In your own interest. He merits your fullest cooperation to that end.

Don't hesitate to ask questions. The warden is ready and willing to assist and inform you. He would much rather help you avoid mistakes than to learn of your violation.

He is your agent, your ally. Call on him.

THIS MONTH'S COVER

SPORTSMEN who enjoy the thrill that comes with meeting wild life in the virgin woodlands of Montana are provided with another rare piece of photography in the cover of the August number of MONTANA WILD LIFE. This extraordinary photograph was taken just before sunrise in the Big Horn mountains of Montana near the headwaters of the Little Big Horn river by Richard L. Throssel, wizard photographer of Billings. Mr. Throssel's photographs and oil paintings have attracted national attention. They portray wild life as is. The cover picture this month is but further demonstration of his ability. Dick Throssel, who does his hunting with his camera, tells this little story regarding how the picture of the bull elk was taken:

"While in the Big Horn mountains on a camping trip I heard the big fellow's call just before sunrise. I went gunning for him and having long ago exchanged my rifle for the camera, the closed seasons on game no longer worry me. We met each other face to face at about forty paces and I got him fair before he figured out what it was all about. This picture is just as attractive as his mounted head would have been. His horns are in the velvet at this time of year and the spreading antlers make a striking photograph."

KEEP VERMIN IN CONTROL

A SURPRISING number of predatory animals and birds exist in every agricultural section and wooded area. Many more, in fact, than is generally realized. Vermin does not recognize any closed season, but kills song and insectivorous birds and all kinds of small game in fur and feathers every day in every year.

The fact of the existence of this vermin in such numbers has been emphasized at the game keepers' school recently established by the Game Conservation Society of 20 East 42nd Street, New York, near Clinton, New Jersey. Some twenty young men have been studying game raising and game keeping at the school since April 1st, and as an incidental part of their duties have been instructed to kill whatever vermin they could find on the property. This is not in a remote and uninhabited area, but is a group of average northern New Jersey farms.

As a matter of interest a record of the vermin destroyed has been kept and numbered a total of 302 predatory animals and birds.

The list includes hawks, owls, crows, rats, snakes and skunks.

We only see these animals and birds occasionally in the hours we spend out of doors. This, however, is no indication of the numbers in which they exist in agricultural sections.

RESTOCK THE STREAMS

The weakest alibi for decreasing game and fish is "ease of transportation." Modern transportation provides equal facility for maintaining the supplies.

GAME CROPS AND SCIENCE

GAME CONSERVATION in years gone by has had to deal with the question of whether it is worth while to perpetuate wild life. Game conservation from this time on must grapple with the problem of how to do it. This work requires a changed mental attitude—perhaps less courage but more patience, less oratory but more thought, less legislation but more education, less opinion and more research. Aldo Leopold of the United States Forest Service, in the current edition of FINS, FEATHERS AND FUR, official publication of the department of conservation of the state of Minnesota, hits the nail on the head with this statement:

"There is no more hope of raising game crops without science than of raising farm crops or forests without science. Let me state with all the emphasis at my command that game management research is a job of continental proportions. It involves every acre of rural and forest land in the country. This job is not going to be done, or even scratched, in the spare time of a few enthusiasts, or by a dribbling appropriation here and there. Agriculture and forestry began to apply science to their crops decades ago. Game management must do so now, or fail."

ROVING CATS KILL THE BIRDS

ONE OF the greatest enemies to game is the stray house cat. The roving feline hunts both day and night, destroying young rabbits and frightening birds from their nests. Song or game birds frightened from their nests in the night generally can not return until daylight. The eggs of the young birds become chilled and are lost.

T. Gilbert Pearson, head of the National Association of Audubon Societies, has stressed the necessity for curbing the cats in an interesting article written especially for MONTANA WILD LIFE appearing elsewhere in this edition. Mr. Pearson has for years been an outstanding exponent of the cause of feathered friends. His achievements are known throughout the nation and his expressions along lines of wild life conservation carry unusual weight.

The good qualities of the cat are offset by its bad habits. When introduced from England it was claimed that cats would destroy all rats and rodents. They have had a 300-year trial and rats and rodents are as numerous as ever.

FISHING AND HUNTING NO LONGER "CHEAP"

IN A RECENT illuminating article on hunting and fishing conditions in Massachusetts, Director William C. Adams of the Division of Fisheries and Game clearly shows the folly of expecting to restore or maintain an abundance of fish and game with the small revenue now available from the $2.25 sporting license charged in that state.

The revenues accruing from license fees pay for producing about 250,000 six-inch trout, the operation of one pond culture station for bass, sunfish and perch and pickerel, the planting of perch and other pond fish from posted ponds in public waters, the operation of four game farms for rearing of pheasants and the maintenance of the game warden force, of which 31 men are employed in the country and a few in the towns and cities. This organization, while efficient and as productive as could be expected, does not meet the requirements of the great army of people who hunt and fish and want an ample supply to drawn on.

"Increase our law enforcement agencies," says Mr. Adams, "so that we can protect the wild stock and all that we add to it by artificial methods. Reduce vermin that destroys every day in the year. Put a chain of sanctuaries across the state and take over and save our finer fishing streams. Provide more game farms, fish hatcheries and pond cultural and salvage units. Increase scientific research into all phases of fish, bird and mammal breeding and feeding and disease. Let individuals and clubs realize that the state can never produce all the fish and game to meet the demands; that they must raise more stock to supplement the annual output for their respective localities.

"All this means more cash, and more cash. This will have to come from the hunters, trappers, anglers and nature lovers. Today the work is paid for entirely by the first three groups who buy licenses, and fines collected by the warden force. Not one cent is contributed by the general taxpayers or the million and a half people who are interested in wild life but do not hunt or fish."

WHAT ABOUT THE SONG BIRDS?

WHEN SPORTSMEN begin to appeal to state legislatures for direct appropriations for the protection of song and game birds it will be well to get the co-operation of sentimentalists and agriculturists in backing the measures.

Oftentimes we hear critics saying that sportsmen are endeavoring to perpetuate wild life that they may kill. What are the other lovers of nature doing to protect non-game species?

Another phase of direct legislative appropriations for wild life restoration and protection is from the business building and community building value.

Let us now lay plans for a concerted effort to supplement our license revenue to help in some measure in perpetuating our wild life heritage.

THE ANCIENT ORDER OF HUMAN HOGS

Qualifications for Membership in This Order

FISH—Don't put back the little one, and don't observe the law that says your catch of trout shall not exceed 20 pounds in weight.

GAME—Violate the laws, kill ducks in the spring on a hunter's license. Shoot partridges during the closed season. Don't buy a hunter's license. Shoot big game without seeing the head.

BIRDS—Destroy song birds, their nests and eggs. Be a hooligan hunter.

FARMS—Trample down crops. Steal fruit and vegetables. Destroy all fences. Help yourself to fire wood. Break off the branches of flowering trees, don't use a knife.

WOODS—Be careless of your smokes and camp fires. Pull up wild flowers by the roots. Misuse camps and boats.

RESPECT YOUR PRIVILEGE

THE season is at hand when Montana anglers are responding to the call of the open again and it is important to keep in mind the courteous consideration due the owner of the land upon which you seek recreation.

In reaching picnic ground or trout brook, do not drive or tramp rough-shod across the farmer's lands. Always keep to the edge of the fields; they may be newly planted with grain. Don't damage fences or other property. Leave the gates as you find them. Don't frighten or annoy livestock or poultry. Be careful of fire in every form. Dispose of all rubbish in such a way that the place will be as attractive when you leave as it was when you came. Respect "No Trespass" signs. If you think they were meant for some one else, inquire before you take a chance.

The farmer's good will is necessary to the continued enjoyment of your recreation on his land. Merit it.

COOPERATION IS NECESSARY

REAL conservation interest on the part of sportsmen of the country, acting together and with intelligent direction, is all that will save the wild life of the United States from being totally destroyed, Postmaster General Harry S. New said recently.

"The rapid development of the country and the consequent destruction of the natural refuges will of itself bring about the extinction of its wild life unless intelligent effort is made by those who, from actual observation and experience, have some knowledge of the steps necessary to its preservation, and respond to the invitation entertained by every true sportsman to see that those steps are taken," he said.

SAVE FORESTS AND STREAMS

CONSERVATION means guarding, preserving, and, if possible, enhancing the natural resources of our country that we may enjoy them to best advantage and hand them down unspoiled to our children.—Henry van Dyke.

YOU CAN'T FOOL 'EM

IT IS easy to fool yourself. It is more difficult to fool the people you work for. It is still more difficult to fool the people you work with and it is almost impossible to fool the people who work under your direction.

Montana Fur Farms Mean Millions

MONTANA has come to recognize the value of its four-footed wealth—the fur-farming industry—at once the oldest and the newest in a land that was once traversed by intrepid explorers. Pens and runways have taken the place of the virgin forest as the untrammeled haunts of fur-bearing animals. They are being raised and cultivated under direction of trained men who are investing heavily that the industry may flourish. Co-operation and proper supervision is being supplied by Montana's State Fish and Game Commission.

In a recent bulletin issued by Barclay Craighead, chief of the division of publicity of Montana's department of agriculture, it was estimated that the total value of all Montana fish, game and fur products in 1927 was $2,500,000.

Montana, first in area of forest reserves, should lead the nation in fur production. Louisiana will this year turn out fur products valued at about $10,000,000. Eastern states with denser population, more intense cultivation of the soil and lack of forest cover are not as well fitted for fur production as is Montana, but some of these states have earlier awakened to the possibilities in domestic breeding and raising of fur-bearing animals.

Fur farming has been responsible for bringing the number of beaver from almost zero to many thousands in such a thickly settled state as Pennsylvania. This year after a century of absence the beaver skin will constitute an item of commerce in that state. Similar increases have been the experience of New York, Colorado and Louisiana.

FUR FARMING RULES AND REGULATIONS

THE State Fish and Game Commission has formulated and adopted the following rules and regulations regarding the capture of game birds, game and fur-bearing animals for foundation stock to be used in the creation of game and fur-bearing animal farms after proper permission: "That each person or persons or corporation desiring to create and establish a game or fur-bearing animal farm as provided for under Section 3777 of the Revised Codes of Montana, 1921, as amended by the Session Laws of 1925, be entitled to take or capture for such purpose not more than four (4) pairs of any one variety of game birds, nor more than four (4) deer, two (2) moose, four (4) elk, four (4) antelope, two (2) caribou, two (2) mountain sheep, two (2) mountain goats, two (2) bear, nor more than two (2) pairs of marten, two (2) pairs of otter, two (2) pairs of foxes, five (5) pairs of muskrats, two (2) pairs of fisher, two (2) pairs of mink, one (1) pair of raccoon, and two (2) pairs of beaver, provided, however, that any one fencing in an enclosure for the purpose of retaining fur-bearing animals therein upon ground owned or leased by him or them in which there are certain muskrat or beaver, shall have the right to retain the same as a part of said foundation stock."

Wyoming, Colorado, Pennsylvania and New York have each more beaver than Alaska. Louisiana's muskrat catch alone brings a far greater sum than the entire returns of the Montana fur catch. Louisiana, in her small area, produces 2,000 otters a year.

The owner of a farm in Wisconsin was recently offered $8,000,000 for his establishment, which offer was declined. This farm, it is expected, will have on hand this year about 15,000 foxes and will turn off upward of 10,000 pelts per year. The breeding stock is valued at from $1,000 to $5,000 and $6,000 a pair.

Montana is the natural home of most fo the fur-bearing animals, the nation's greatest reservoir of wild life. Records of fur-bearing animals shipped outside the state in 1927, as compiled by the State Fish and Game Department, show a total of about 130,000 and include 111,762 muskrat, 4,487 mink, 735 fox, 585 raccoon, 63 otter and 9,222 beaver.

Demonstrating shifts in the fur industry, it is pointed out that the lowly jack rabbit probably contributed more to state income in Montana last year than any other fur animal with the exception of the muskrat. During the winter of 1926-27 one firm alone took 58,498 rabbit skins out of Montana. Practically all of these skins were jack rabbit skins. The skins of the white rabbits, properly stretched and dried, brought 60 cents a pound or about 17 cents each, the gray 40 cents per pound. They are of some value as food and game and their flesh is sometimes fed to poultry. Chinchilla rabbits are now raised in almost every county in the state.

The number of fur farms in the state has more than doubled in the last three years. Three years ago only 41 such licenses were issued by the state department, and in 1927 exactly 100 licenses were issued. The farms are scattered in 37 of the 56 counties of the state. Flathead leads with 15 fur farms, Yellowstone has seven, Lake has six, Carbon and Gallatin five each. Other counties having more than two farms are Missoula, Sanders, Stillwater, Park, Lincoln, Deer Lodge, Ravalli and Broadwater.

Some of the farms have been quite successful. One near Kalispell is an example. Started from a small beginning a few years ago, the ranch now not only breeds and raises silver foxes but also takes fox pups from Alaska breeders for finishing off as the Montana climate is known to produce the finest quality fur. Another is said to be the largest muskrat farm under fence in the United States. Five acres are fenced near Swan Lake in Lake county and more than 100 experimental pens have been constructed. It is expected within a short time that the ranch will produce 20,000 to 30,000 pelts annually. A farm in Yellowstone county raises skunks, otter, raccoon, opossum, mink and muskrat. Furs shipped from this section of the country command a larger price as a rule than those from other states, climatic conditions being especially good for the production of high quality.

Another Sheep Killer Goes West

Predatory animal hunters in the employ of the State Fish and Game Commission, the Biological Survey and the State Livestock Commission are winning merited commendation for their work in downing such killers as this bloodthirsty bruin. Out of every fee for hunting and fishing licenses, 25 cents goes into the fund to aid in maintaining these hunters.

A farm in Mineral county has domesticated lynx and one in Missoula county now has about 600 foxes. A ranch in Cascade county has purchased 1,000 pairs of muskrats while one north of Corvallis in the Bitter Root raises Karakul sheep, the bearers of luxurious Persian lamb fur which commands the highest prices for trimming wearing apparel, besides black foxes, skunk, raccoon and muskrat.

Another yardstick by which the importance of the fur industry in Montana may be measured comes from the records of license fees paid to the state fish and game department, the industry contributing about $31,000 during the last year. More than a thousand trappers' licenses were issued, bringing $10,270 in revenue to the department. A total of 2,601 shipping permits were issued, as were 541 permits to trap beaver.

David Hilger, state historian, says that in 1867, "there was no section of the known world of the territorial size of Montana that contained as many buffalo, elk, deer, antelope, beaver, coyotes, bear and wolves as did this territory." This country was once litreally swarming with millions of fur bearers, but one day, as Hal Evarts says in an article on the Alaska fur business, trappers and traders woke up to find that they had trapped and shot themselves out of a job.

It is not more than 70 years since the fur trade was almost the only business transacted in the entire northwestern territory. The first fur trading expedition to enter the territory that is now Montana was that of Manuel Lisa in the spring of 1807, although free traders had trapped in the region for many years prior to the Lewis and Clark expedition (1805). Lisa established a post at the junction of the Yellowstone and the Big Horn rivers. Between 1805 and 1834, a quarter of a century, three companies, the Missouri, the Rocky Mountain, and the American, entered the territory of which Montana is a large part, scattered their posts over the land, fought each other and the Indians, saw the retreat of two great foreign companies, the Hudson Bay and the Northwestern, into Canadian territory, and took millions of dollars' worth of furs out of the wilderness to enrich world markets and build the fortunes of their owners and directors.

At that time the fur trade was a big item in the commerce of North America, notwithstanding the fact that there was no great fur market on this continent. Furs were not dressed nor dyed here but were shipped to Europe. We now have two markets that are worldwide in scope, one at St. Louis and the other at New York. Furs are sorted, classed, dressed and dyed in these markets and sold at auction in transactions that sometimes represent the transfer of more than $2,000,000 in a single day.

Today the fur trade of the United States is estimated to be worth more than $175,000,000 annually. Fur sales now in the United States and Canada dispose of over 100,000,000 pelts a year counting rabbit, mole and muskrat.

Montana is capable of producing 10 per cent of the nation's fur as well as 10 per cent of her wool and wheat and with the development of the modern fur farm may, in the next decade, reach this return.

DUCK CLUB RULES

COMMERCIAL duck clubs where hunters may obtain accommodations and shooting operate under state permit in California. There are 38 such clubs operating under strict regulations laid down by the fish and game division.

Some of the regulations governing such clubs are:

No club may guarantee a limit.

Continual shooting at birds out of range will be considered a nuisance and result in the shooter being barred from the club. This rule results in fewer wounded birds which are not retrieved.

No shooter is permitted to hunt at large when the blinds are full.

A HARE IN THE STEW

A Mexican had rabbit meat in his pail, and he shared his supply generously with his comrade.

One night the American asked:

"Where you get rabbits, Jose? I can't find any."

"My wife, she get um," Jose replied. "She say every night they come round the house and make noise. She shoot 'um."

"Noise? Rabbits don't make a noise —you nut."

"Sure," Jose asserted, positively. "Go 'meow, meow'."—Haversticks.

THE LOON

(By Mary E. Barclay)

WHO mournfully wails in the dead of night?
Whose cries make me shiver and tremble with fright?
Now hollow and eerie it ends in a groan—
Now piercing and shrill, dying down to a moan.
What tragedy, bird, has your sturdy heart known,
That always you grieve, and are always alone?
Has the world been unkind to you, treated you ill?
Does some haunting memory cling to you still?
Cease, cease, your lamenting, O, lonely wild thing
Of that ancient woe must you evermore sing?
Your heart must be weary, and bursting with grief
And your poor stricken spirit must long for relief.
There's beauty about you, and magic to spare
In woods, sky and water, to drive away care.

CALIFORNIA VALUES WILD LIFE

Earl R. Kaunffman, editor of Pacific Sportsman, has this to say:

"Approximate monetary value of fish and game to California is $936,000,000. Deer season value to business men of state, $5,000,000. These figures are based upon recreational value, and the drawing power upon tourists, rather than actual monetary units. But they form food for thought for the man or woman who violates the game laws, thus depleting this wild life supply in California. Think it over!"

Muskrat Farm is Nation's Largest

The photograph above shows the main buildings and a portion of the land under fence at the Swan Lake fur farm. The lower fence fronts on the lake shore. The experimental pens are located back of the buildings and the fence is so arranged that the fur-bearing animals may be controlled and conserved. Portion of Swan Lake utilized by the muskrat farm established by James M. Hall in Lake County. The farm is the largest of its kind in the nation.

CATS AND BIRDS

Written for MONTANA WILD LIFE by T. GILBERT PEARSON, President, National Association of Audubon Societies

MORE BIRDS are eaten by cats than are killed by shotguns. The best authorities available state that in New York City there are 1,500,000 cats cared for in people's homes and there are at least half a million homeless alley cats. Figuring on the same basis for the rest of the country, we may say there are not less than fifty million cats in the United States. Certain individual cats have been followed by naturalists and found to catch from fifteen to twenty-four birds in a day, which gives an opportunity for more figuring. There is no healthy cat however well cared for but what will hunt and catch birds if it has the slightest chance, statements of kind-hearted cat owners to the contrary notwithstanding.

One of my children came into possession of a little kitten. When it was about ten weeks old it was lying asleep on the couch one day, when I placed on the Victrola a record reproducing the song of a wild nightingale. The young cat paid no attention to the two records which had previously been played, but when the first clear notes of the nightingale's song rang ont in the air the kitten instantly became alert, and with all the stealth of a leopard creeping upon a fawn it pursued its crouching way along the length of the couch towards the instrument from which the sounds issued. That cat had never been out of the house; it was in the midst of winter, and it had never heard or even seen a bird, but its instinct to catch and eat birds surged through every vein and thrilled in every nerve of its being.

Cats are the most destructive foes ever let loose by human beings against the bird-life of the country.

Many times I have been told by people that they were great bird lovers, and that they fed the birds and gave them water and provided nesting boxes about their grounds, and yet these same people fed cats at the back door.

Many people who have extra kittens that they want to dispose of, instead of doing the honorable, kindly act of exterminating such potential destroyers of wild life, will take them out and leave them in the woods where they can starve or pick up a miserable living on grasshoppers, mice and birds.

In the center of Rome stands Trajan's Forum. It is a hole in the ground with precipitous walls fifteen or twenty feet high all around it. Here come hundreds of Italian women every year and drop in the cats which they are tired of feeding. As the cats can not escape and manna does not fall in Italy, their condition is not a joyous one to behold or contemplate. Needless to say, Trajan's Forum is not a popular spot for the wild birds of the neighborhood.

Some cities of the United States have passed ordinances requiring people to pay a tax on their cats. In New York and New Jersey there is a state law making it the duty of every state game warden to kill every cat he finds bird hunting.

If there was a tax on cats your neighbor could collect from you if you killed one of his feline pets, but today, as he pays no tax on his cat, he is not legally in position to complain of your action as he would be if, for example, you had killed his cow or his dog.

Personally, I will pet any nice cat I can catch; officially, for the interests of the bird life of America, I would sink every one without a trace.

THE SPORTSMAN'S CREED

1. Never in sport endanger human life.
2. Never kill wantonly or needlessly or brutally.
3. Obey the laws of state and nation, work for better laws, and uphold the law-enforcing authorities.
4. Respect the rights of farmers and property owners, and also their feelings.
5. Always leave seed birds or game in cover.
6. Never be a fish hog.
7. Discourage the killing of game for commercial purposes, by refusing to purchase trophies.
8. Study and record the natural history of game species in the interest of science.
9. Love Nature and its denizens and—BE A GENTLEMAN.

Zane Grey.

FISHERMAN'S LUCK

BACKWARD, turn backward, O time in your flight; please make 'em bite again just for tonight. I've sat on this boulder for sixteen long hours, and baited with crawfish and doughballs and flowers, and minnows and rye bread and liver and bees, and grasshoppers, fishworms and limburger cheese. And never a nibble—a jerk on the line—of sunfish or sucker I've seen not a sign. My arms are fried brown and my nose is burnt red—my seat is worn thin and my legs are both dead. My stomach is puckered, tied up in a knot, and yearns for a waffle or something else hot. I'm sore and I'm dirty and thirsty and stiff; I've lost my tobacco and ain't had a whiff. And I've got the smallpox, the measles or pip; I'm all broken up on my shins and my hip. It's fourteen long hours by the road to my shack—to cold cream—to comfort—to rest and a snack. O, backward, I guess, is the way I shall turn; they don't want to bite and I don't give a durn. For I have been fishing—I've had a good day; now all that I want is some grub and the "hay."

Give fools their gold, and knaves their power,
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all.
—John Greenleaf Whittier.

STATE DEPARTMENT RECEIPTS FOR JULY

MONTANA'S great out-of-doors becomes more and more attractive, according to receipts to the State Fish and Game Department each month, derived largely from hunting and fishing licenses and from fines from those who disobey the laws protecting wild life. During the 31 days of July $31,911.85 was collected by the State Department, $28,078.60 of which goes into the fish and game fund and $3,833.25 into the biological fund for destruction of predatory animals preying on livestock and big game.

Licenses alone accounted for $30,720.80 of the total collected for the month, while the remainder was derived from permits, refunds, fines and other items. The collections are:

Resident hunting and fishing licenses	$29,130.00
Non-resident hunting and fishing licenses	2,516.50
General non-resident hunting and fishing licenses	60.00
Non-resident limited hunting and fishing licenses	20.00
General alien hunting and fishing licenses	50.00
Alien fishing licenses	460.00
Agents' commissions	1,515.70
Total	$30,720.80
Shipping permits	$ 21.00
Guides' licenses	30.00
Seining licenses	10.00
Game farm licenses	40.00
Beaver permits	30.00
Beaver tags	67.50
Total	$ 198.50
Refunds	$ 171.65
Fines	729.55
Confiscations	2.35
Subscriptions MONTANA WILD LIFE	89.00
Grand total	$31,911.85

STATE SUPPLIES PHEASANT EGGS

Ringneck pheasant eggs for hatching will be supplied free to New Jersay farmers by the State Fish and Game Commission this year as long as the surplus supply of these eggs is available from the game farms at Forked River and Rockport. Application for these eggs, the commission announces, is made to county wardens.

The breeding flocks at the game farms produce quantities of eggs beyond the hatching capacity of the establishments. A few years ago the State Fish and Game Commission inaugurated the practice of sending out settings of these surplus pheasant eggs to farmers interested in increasing the game supply in their respective communities. This plan has been increasingly successful and thousands of pheasants reared on home farms now supplement the supply released directly by the state warden.

Landowner and Sportsman

By E. LEE LeCOMPTE, State Game Warden of Maryland

AS TIME goes on officials in charge of game administration, not only in the United States but in Canada as well, find their position increasingly important, as they must promulgate regulations and adopt methods for the protection and propagation of game birds and game animals and in addition act as an arbitrator between the landowner and the hunter who hunts on lands other than his own.

Unfortunately, every hunter is not a sportsman. Otherwise, the problem of trespassing would be solved. It is regrettable that a large percentage of persons who hunt disregard all rules, regulations and laws of the true sportsman and especially does this apply to those hunters who disregard trespass notices and landowners' rights.

The result is that the true sportsman is ofttimes compelled to suffer and make sacrifices on account of the class termed as hunters. The landowner raises the game, but under the rulings of not only state courts but the supreme courts of the United States as well, all game has been termed as belonging to the state in which it is found and not to the person on whose land it is located. This, of course, must be true as game birds and game animals propagated on a certain area do not always remain within that confined area but spread out in the section where they were raised. The landowners' rights should be recognized by every person who goes afield in quest of game. Unfortunately, we have a great many hunters who not only disrespect the landowners' rights by not making a request to hunt but sometimes destroy poultry, pigeons, and tear down or cut down fences. Any true sportsman regrets the action of this class of hunters.

At the annual game conference of the American Game Protective Association, held in New York, a committee which was appointed to collect detailed information from the states presented a valuable report to bring about a better understanding between the landowner and the sportsman.

The report of the committee on relations of sportsmen and landowners follows:

The fact should be emphasized that there is a difference between sportsmen and mere shooters; that the sportsmen and the farmers should be allies; that their interests are identical, and that the fellow who is merely a shooter and not a sportsman is responsible for the annoyance to the farmer which casts odium on the sportsman.

The true sportsman will be and is anxious to help the landowner restrain the irresponsible, to assist in patrolling his premises and furnishing him protection. He will join with the owner in the expense of planting food for game and hedge rows along the fences, and in the control of vermin which is destructive to game and domestic poultry. In other words the landowner and the sportsman can legitimately and profitably cooperate to the fullest extent, to the end that both will receive many benefits. The owner will be relieved from vandalism and be protected from marauders. The game, which is an asset to his property, will be conserved and increased, insectivorous birds, which are essential to crops, will be preserved, and the sportsman in return will occasionally have the privilege of enjoying a day in the field.

The title to all forms of protected wild life is vested in the several states, provinces and federal government for the purpose of regulating the time, manner and extent of taking the same by the individual, equipped under statute and authorized to hunt, pursue or kill such game birds or animals.

A license issued to the gunner by any duly constituted authority is a privilege granted under the statute to the hunter to kill game in the political division or subdivision set out in the face of the license.

When a government or its agent grants such a privilege to a hunter in the form of a license, it conveys no waiver of the rights of the property owner or landlord in the protection of his property, both personal and real, against undue trespass on the part of the licensed hunter.

Posted lands are not conducive to the protection of game so long as we have hunters who are not sportsmen. A sportsman, seeing a poster "No Hunting Allowed," will not enter the premises, but the fellow who does not care to respect the rules of sportsmanship will, upon seeing the forbidden sign, be tempted because little or no hunting has been done on the premises, will disregard the notice and shoot on the posted property, to the disgust and annoyance of the owner.

The several states and provinces and the federal government of the United States and Canada, and the organized sportsmen should join in organizing an educational campaign and carry it to both the hunter and landowner, teaching the hunter the necessity for the protection of hunting areas from fire and for the care and protection of fences and livestock on the farms, and informing the farmer that but for the revenue which the hunters contribute annually through the purchase of hunting licenses, there could be no protection given by his government to the game on his premises, and no propagating and planting of game to restore depleted covers.

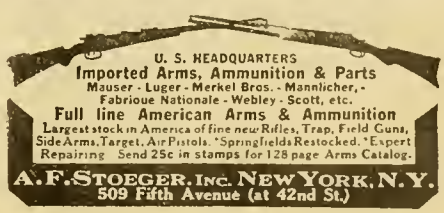
It must not be lost sight of that in administering game laws, not only is the game which is shot by the hunter protected, but the insectivorous and seed eating birds, without which agriculture would be impossible, are also protected. The revenue derived from the hunters' licenses pays for all this, as well as the restocking and care of game. The protection from forest and other fires is also contributed to from the same source.

It is of the greatest importance to the sportsmen individually and collectively to furnish grain and other crops to property owners and to cooperate with the state in planting and cultivating food for game birds and quadrupeds. Food bearing plants and shrubs should be generally planted in game covers and brood stock of game species should be furnished by individual sportsmen and clubs as well as the state to assist the landowner in restocking his covers.

All who go afield must recognize the fact that good sport can not be had for nothing, and like the automobile or other desirable means of pleasure and recreation, it has to be paid for. It is a form of recreation which can no longer be obtained free. Recklessness in destroying wild life without any care for the future should be universally and most severely condemned, and all sportsmen should recognize the fact that effective methods of maintaining the supply, such as are employed in agriculture and stock raising, must be applied. The following is a quotation from a letter from L. J. Taber, President, National Grange:

"For years we have enjoyed the lavish bounty of nature without making any return; every individual sportsman must now realize his individual obligation to replace what he takes in sport.

"Therefore, the necessary steps to develop good will between the landowner and the sportsman are, first, a recognition of the farmers' rights. Courtesy and common sense are essential. Local sportsmen's associations should prove their belief in fair play by helping to prosecute game-law violators and trespassers who injure farm property. Local sportsmen's associations should have standing committees to cooperate with the Grange, the Farm Bureau Federation and other farmers' organizations for the promotion of better understanding. Farmers should be invited to affiliate with all sportsmen's associations and to participate in all their social events in order that leaders of thought and sentiment of both may become better acquainted and thereby be better able to meet on a basis of mutual friendship and understanding."



DOUBLES CHAMPION WITH SHOTGUN KILLS TWO BEAR WITH RIFLE

THIS is a story about a doubles champion. It's a true story of marksmanship of a gentleman who resides in Louisiana, yet loves Montana so well that he has erected one of the finest cabins in the state on the shore of Hebgen Lake on the upper Madison.

Last year Ed. Dickinson won the doubles championship of Louisiana with his scattergun . This year, only a few weeks ago he won the doubles championsbip of Montana with his rifle, when he keeled over two husky brown bear a short distance from the palatial cabin that's his home on the Madison.

Ed. Dickinson is a modest fellow. He seldom speaks of his achievements. His cabin, a modest peeled log structure of about eight rooms chinked with cotton from the south, epuipped with running water from a mountain spring, every convenience of civilization and true sonthern hospitality, is a haven to his friends willing to brave the long drive to the great fishing and hunting paradise of Montana.

Tom Danaher, deputy state game warden stationed at the Hebgen dam in the upper Madison county, likewise a modest chap, reluctantly tells the story of Dickinson's doubles championship victory:

"I was at Dickinson's cabin when we spotted a bear that was big enough for a silver tip, ambling along the mountain side. He was half a mile away. Dickinson is a nonresident, so I told him that if he'd buy a nonresident hunting license, we'd go after the bear. I didn't think he could hit a flock of bears after shooting a shotgun as long as he has. He wanted to shoot when the bear was 300 yards away. Then came another bruin, a big brown fellow. When the first bear was about 100 yards away away, Dickinson cut loose. His first shot broke her backbone and she fell in her tracks. When the yearling came along Dick cut loose again. After he had plugged him with the first shot, he ran about 10 yards and died in his tracks. Some doubles shooting, eh?"

THE GAME PRESERVE

By Cassandra Osburn Phelps
(Hobson, Mont.)

GREEN branches bend above a placid pool,
Pale blossoms lean to scan reflected skies,
And far beneath the depths of waters cool,
The rainbow trout in tranquil safety lies.
No alien footstep comes their peace to mar,
No crash of firearms rends the quiet air,
As, from the hills and mountains near and far,
In faith serene the woodland creatures fare.
Here grouse can rear their young in secret nest.
Here antlered deer their timid mates may meet.
Here migrant fowl may find a place to rest,
And hunted life seek ever safe retreat.

DEER INCREASE IN FLORIDA

In a recent report from representatives covering the Southern Gulf States comes the information that over 1,000 deer were reported killed in Florida during the last "open" season. The exact figures from the Florida State Department of Fish and Game show a kill of 1,010 deer.

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AND SOME OATS

The jury had been out on the game law violation case all morning and was still deadlocked. The vote stood 11 to 1 for conviction, but an old codger stubbornly held out for a verdict of acquittal.

The sheriff came in at dinner time and inquired what they would have to eat.

"W-a-l," said the foreman disgustedly, "you kin bring us eleven dinners and a bale of hay."

A FABLE FOR THE SEASON

A fox, a steer and a sheep met at the edge of a wood and took to complaining thus of man:

"To think," snarled the fox, "that I am hunted for my skin. I adorn foolish women. . . . ."

"I," grumbled the steer, "have my hide tanned into leather to beat on dirty roads and city pavements."

The sheep appeared to be the most distressed of all. "Think of me," it bleated piteously. "My skin is used for diplomas."

FAIR ENOUGH

"Is this your name?" politely inpuired the paying teller to the elderly woman at the widow.

"Certainly," was the haughty answer. "I am sorry, Madam, but you will have to be identified. I don't know you."

"Now, don't be silly," was the indignant reply. "I don't know you either."

Hunting & Fishing

is a 52-page monthly magazine crammed full of hunting, fishing, camping and trapping stories and pictures, valuable information about guns, rifles, fishing tackle, game law changes, best places to get fish and game, etc. Biggest value ever offered in a sporting magazine. And here's the famous

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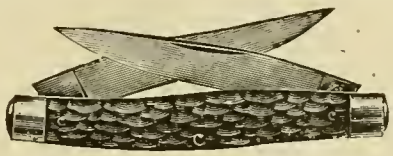

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It is your desire to maintain hunting and fishing for yourself as well as for posterity. You are interested in keeping in touch with activities of the Montana State Fish and Game Department. You are a believer in sportsmanship.

The magazine, MONTANA WILD LIFE, has been established by the department to aid in this great educational work of conservation. The subscription rate has been placed within the reach of every man and woman in the state. Do you wish to aid in making MONTANA WILD LIFE a bigger, better, more powerful champion of your interests? Think it over and then fill out the accompanying blank.

To the Editor, Montana Wild Life,
State Capitol Building,
Helena, Montana.

Please send MONTANA WILD LIFE to the following addresses for one year, beginning with the next issue after receipt of this order. Check is enclosed to cover these subscriptions at 50 cents each:

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What the Other Fellers Think About Us

Anaconda Standard, Anaconda, Mont.—The first edition of MONTANA WILD LIFE, an attractive and interesting pamphlet-publication of the Montana State Fish and Game Department, has been received in Anaconda. Local anglers who have felt a need for an official publication with news, up-to-date and reliable information on the wild life of Montana are more than pleased with the first issue and wish it unbounded success.

The pamphlet is edited by Floyd L. Smith, an authority on the work of the Department and on all fish and game preservation movements in this state. The Fish and Game Department has established the publication to meet the demand for accurate, authentic information. Its purpose is to disseminate authoritative information regarding the activities of the Department and to present articles of educational value which will be appreciated by men who love the out-of-doors.

Other aims of the attractive publication are: To preserve the resources of the forest and stream for future generations; to aid in perpetuating the sports afield for the sportsmen; to make better hunting and fishing conditions, and in helping the angler and hunter to enjoy the fullness of Montana's great outdoor playgrounds.

The Missoulian, Missoula, Mont.—It is learned, through the medium of sportsmen's magazines and newspapers, of large catches of fish, of excellent bags of wildfowl, of lordly antlered bucks that have been taken by Montana sportsmen. We have gradually come to realize that Montana is a sportsman's heaven, but until recently there was little information available about what made this much-to-be-enjoyed condition possible. From Helena comes a genuine game conservation magazine. MONTANA WILD LIFE, the official organ of the State Fish and Game Commission, has gained an instantaneous hold upon the imaginations of Montana sportsmen. Dedicated as it is to the conservative use of our wild life resources, the magazine has filled a long-felt need. It shows to the sportsmen the activities of the Game Commission, their troubles and their achievements. And it has cleared up a great deal of misapprehension regarding work of the men in charge of our natural resources of game and fish.

S. P. Cornelius, Redstone, Mont.—I have read the first two issues of MONTANA WILD LIFE with a great deal of pleasure and wish to congratulate the Department on the new publication, which is full of facts worthy of attention. I shall look forward to each and every issue. Enclosed find check for 10 new subscriptions.

T. Gilbert Pearson, LL.D., President, National Association of Audubon Societies. New York City.—Mr. Smith, do you recall when we met several years ago in Utah when returning from looking into the deer situation in the Kaibab? I have been reading MONTANA WILD LIFE with a great deal of interest. This magazine should have a splendid effect in arousing and consolidating the interests of the people of Montana in wild life conservation. I am certainly glad you are publishing it. I hope to receive every copy as it appears and will carefully preserve and bind them for our library.

W. F. Aldrich, Editor and Publisher, The Independent-Observer, Conrad, Mont.—MONTANA WILD LIFE is a splendid publication and I hope that it will be continued.

G. A. Tremper, Milltown, Mont.—In the interest of good sportsmanship in Montana, may I suggest that a copy of MONTANA WILD LIFE be sent to every man and woman who buys a hunting and fishing license? I saw a copy of the official magazine of the State Commission at the East Side station at Missoula and immediately subscribed for it. The cost of subscription is so small and the object of fish and game conservation is so great that every sportsman in the state should support the magazine.

Haskell Noyes, Milwaukee, Wis., President, Executive Committee, Izaak Walton League of America.—MONTANA WILD LIFE is a big step along lines of fish and game conservation and the State Commission is to be congratulated. I am enclosing my check for subscription for myself and several friends. All of us realize that the educational work along conservation lines is of utmost importance and we must live up to the creed of the Izaak Walton League, "A Better America for Americans and Better Americans for America."

Thomas M. Galey, Independence, Kans.—Kindly list me to receive all future copies of MONTANA WILD LIFE. Send the first copy published so that I may have a complete file. Missouri has made a great success of its fish and game publication, and a similar future is in store for Montana. It is the greatest influence in law observance and conservation in the state.

August Wolf, Publicity Director, Davenport Hotel, Spokane, Wish.—Heartiest congratulations on MONTANA WILD LIFE. It is a corking good magazine and will quickly be accorded the popularity it richly deserves. It will grow in influence not only through our beloved western country but throughout the nation. The only kick I have to make is that the reading of the informative articles kept me up long after hours, but, hell's bells, it was time well spent. Every good wish goes with the enclosed subscriptions.

The Symaptomatology of a Loco Victim

(By Dr. Emil Starz, State Chemist, Helena, Mont.)

I am a victim of the weed—
Was once a temperamental steed—
Now Locoed!

My walk is of a staggering gait,
To cross a bridge I am afraid—
It's Loco!

My head aches and my brain is dull,
My optic nerve is on a lull—
From Loco!

My appetite is on a strike,
I eat now only what I like—
The Loco!

My nerves are shattered very bad,
And working is no more my fad;
That's Loco!

The water which I like to sip
Has no attraction for my lip
Since Locoed!

I am dejected and morose,
And irritated is my nose—
From Loco!

My brain which once worked very well,
Is dull and going plumb to hell—
From Loco!

I'm getting lazier every day,
And instead of eating oats and hay
I eat Loco!

Ambition, which I had galore,
Is gone and now I am a bore,
From Loco!

My tail which once whipped flies away,
Is hanging down, a shame to say,
From Loco!

I dream while standing on my feet,
And shy at every paper sheet,
It is the Loco!

When moonshine lights the pasture green,
I always can be plainly seen,
To hunt for Loco!

A hat rack is my former frame,
Believe, it makes me blush for shame,
Oh, Loco!

My spine is curved, my skin is dry,
My ribs are bent and I step high,
From Loco!

My hair falls out, my teeth are loose;
In daytime I begin to snooze,
From Loco!

My pep is gone, so is my pride;
My brethren shun me far and wide,
Because I'm Locoed!

My ears hang down, my lips are twisted,
And now I am officially listed
As Locoed!

My end is near, caused by starvation,
My symptoms need no explanation,
I die from Loco!